HW#100: Arc Length & Sector Area

Geometry

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP:\_\_\_\_\_

FAILURE TO READ ALL DIRECTIONS, WRITE IN COMPELTE SENTENCES, OR SHOW ALL WORK WILL RESULT IN LASALLE

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| --- | --- | --- | --- | --- |
| Task | A satellite orbiting the earth in a circular path stays at a constant altitude of 100 kilometers throughout its orbit. Given that the radius of the earth is 6370 kilometers, find the distance that the satellite travels in completing 70% of one complete orbit. | | | |
| Directions | You are expected to have either complete answers with full justification (explanation in words, mathematical symbols, graphs, etc.) or a valiant attempt at all problems in this set. A valiant attempt consists of (i) Identifying the purpose of the question (ii) Outlining an approach / identifying unknowns (iii) An attempt at that approach (iv) A detailed summary of what you tried and were you are “stuck” (v) Additional questions you have about the problem. You should also have consulted several resources in your attempt, including but not limited to: online research like Khan Academy, the textbook, your group/classmates, Ms. Ramos/Mr. B/Ms. Mitrovich and/or other math teachers. | | | |
|  | | | | |
| Criteria for Success: Use the table below to check that you met all the criteria for success. | | | | |
| Criteria | | Yes?  🖒 | Almost? | No?  🖓 |
| Use multiple representations   * Mathematical domain (VANG) of question is identified. * Mathematical domain (VANG) of answer is identified. * At least a third representation is present. | |  |  |  |
| Connect to prior knowledge   * Giving relevant definitions or properties of math concepts. * Adding “NOT”s * Wrong answers are used as bounds for the problem. | |  |  |  |
| Why > How > What   * Claim (what) is given with specific nouns used (no “it”, “this”, “those”) * Evidence (how) is present * Reasoning (why) ties together evidence, prior knowledge, and multiple representations. | |  |  |  |

More Practice:

|  |  |  |
| --- | --- | --- |
| Find the arc length | Find the area of the sector | Find the perimeter of the sector |
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